## Expérience n°3 :

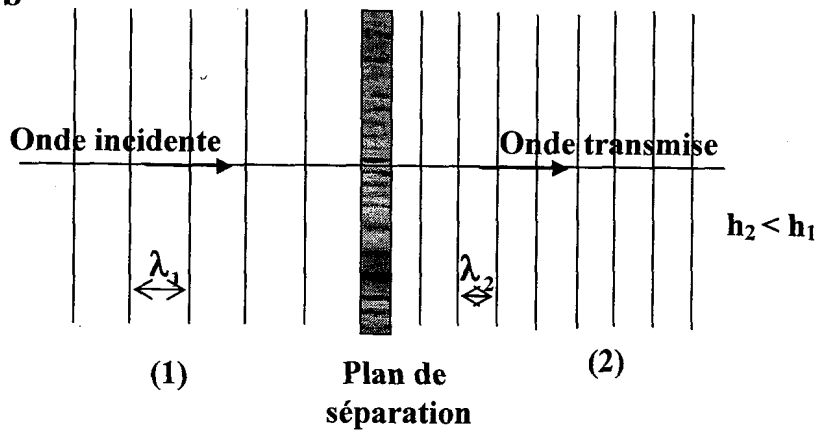
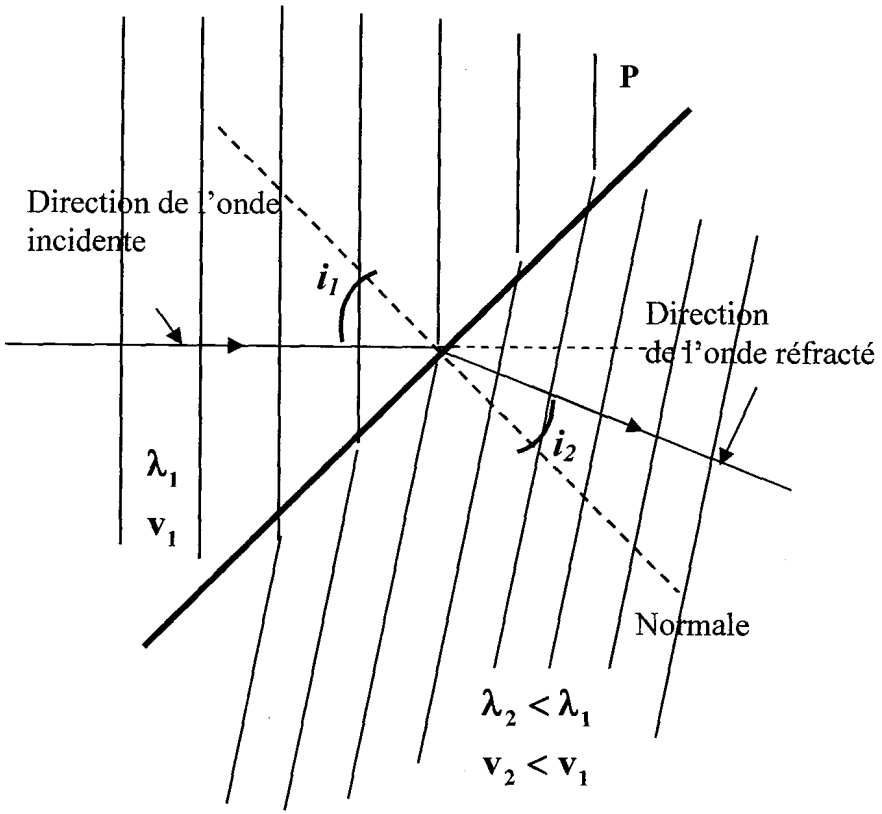
**a- 1^ére cas** : Transmission (cas particulier de réfraction), la direction de l'onde obtenue est la même à celle de l'onde incidence.

**2^éme cas** : réfraction : direction de l'onde obtenue

$$\frac{\sin i_1}{\sin i_2} = \frac{v_1}{v_2} = \frac{\lambda_1}{\lambda_2}$$

$$\begin{cases} v_1 = \sqrt{\|\vec{g}\|.h_1} = \sqrt{16.10^{-2}} = 0,4 m.s^{-1} \rightarrow \lambda_1 = \frac{v_1}{N} = 0,5cm \\ v_2 = \sqrt{\|\vec{g}\|.h_2} = \sqrt{9.10^{-2}} = 0,3 m.s^{-1} \rightarrow \lambda_2 = \frac{v_2}{N} = 0,375cm \end{cases}$$

$$\sin i_2 = v_2 . \frac{\sin i_1}{v_1} = \frac{0,3 \sin 45}{0,4} = 0,53$$

$$\Rightarrow i_2 = 32°$$

**b-**